CLAIMS

1-20 (cancelled)

21. (new) A biomechanical stimulation device comprising:

a base plate;

a drive unit connected to said base plate;

a platform connected to said drive unit; and

wherein said drive unit is configured to move said platform in a first dimension substantially parallel to said base plate and a second dimension substantially perpendicular to said base plate, such that said platform moves within a two-dimensional plane substantially perpendicular to said base plate.

22. (new) The device of claim 21, wherein said drive unit is configured to move said platform in a circular motion.

23. (new) The device of claim 21, wherein said drive unit is configured to move said platform in an eliptical motion.

24. (new) The device of claim 22, wherein said circular motion is about an axis that is parallel to said base plate.

25. (new) The device of cliam 22, wherein said platform remains substantially parallel to said base plate during movement of said platform.

26. (new) The device of claim 21, wherein said drive unit moves said platform at a frequency between 5 Hz and 35 Hz.

27. (new) The device of claim 21 further comprising a control unit for controling frequencies of said platform movement.

28. (new) The device of claim 21 further comprising a pedestal connected to said base.

29. (new) The device of claim 28 further comprising wheels connected to said pedestal.

30. (new) The device of claim 21 further comprising a plurality of openings in said platform.

31. (new) A method of biomechanical muscle stimulation comprising:

providing a biomechanical stimulation device comprising a platform connected to a base;

applying a body part muscle to said platform;

moving said platform within a two-dimensional plane substantially perpendicular to said base; and

wherein movement of said platform is driven by a drive unit connected to said base.

32. (new) The method of claim 31, wherein applying a body part to said platform includes applying a leg muscle to said platform.

33. (new) The method of claim 31, wherein applying a body part to said platform includes applying an arm muscle to said platform.

34. (new) The method of claim 31, wherein said platform is driven to move at a frequency between 5 Hz and 35 Hz.

35. (new) The method of claim 31, wherein said body part muscle is moved in the direction of the line of action of said muscle by said two-dimensional movement of said platform.